

UTILITY PATENT APPLICATION  
ATTORNEY DOCKET TE03001

CLAIMS

5     What is claimed is:

1. An airship comprising:  
a frame;  
a gondola moveably coupled to said frame;  
10    first and second hulls pivotally coupled to said frame; and  
a propulsion system connected to said frame.

2. The airship of claim 1, further comprising an electrical power system.

15    3. The airship of claim 2, further comprising flexible photo-voltaic arrays on at least  
a portion of at least one of said first and second hulls.

4. The airship of claim 3, further comprising a hydrogen generator.

20    5. The airship of claim 2, wherein said hulls have a flexible hull material, said  
flexible hull material comprising a capacitor.

6. The airship of claim 1, wherein said frame comprises a composite material.

25    7. The airship of claim 1, wherein said gondola is vertically extendable and  
retractable relative to said frame.

8. The airship of claim 7, wherein said gondola comprises at least one ISO shipping  
container.

30    9. The airship of claim 7, wherein said gondola comprises a plurality of gondolas.

UTILITY PATENT APPLICATION  
ATTORNEY DOCKET TE03001

10. The airship of claim 1, wherein said hulls are semi-dirigible.
11. The airship of claim 10, wherein said first and second hulls each have at least one rigid hull frame portion proximate said pivotable connection to said frame.  
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12. The airship of claim 10, wherein said first and second hulls each have at least one rigid hull structure portion configured to support a submerged portion of each hull during a landing on water.  
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13. The airship of claim 12, wherein said rigid hull structure portion is configured to be folded.
14. The airship of claim 10, wherein said hulls are at least partially collapsible.  
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15. The airship of claim 14, wherein said airship is configurable to be stored in an ISO container by collapsing, folding, and pivoting said first and second hulls.
16. The airship of claim 14, wherein said airship is configurable to be a terrestrial habitation when landed on a supportive surface and said first and second hulls are collapsed.  
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17. The airship of claim 1, wherein said first and second hulls each comprise an inner gas envelope and an outer gas envelope.  
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18. The airship of claim 17, wherein said inner gas envelope is configured to contain hydrogen and said outer gas envelope is configured to contain helium.
19. The airship of claim 1, wherein said first and second hulls are configured and  
30 pivotal to provide buoyancy for the airship in water.

UTILITY PATENT APPLICATION  
ATTORNEY DOCKET TE03001

20. The airship of claim 1, wherein said propulsion system comprises directionally controllable thrusters.

5        21. The airship of claim 20, wherein at least one thruster of said directionally controllable thrusters is controllable over an angle of ninety degrees relative to said frame.

10        22. The airship of claim 20, wherein at least one thruster of said directionally controllable thrusters is controllable over an angle of two-hundred and seventy degrees relative to said frame.

23. The airship of claim 20, wherein said propulsion system comprises thrusters of more than one type.

UTILITY PATENT APPLICATION  
ATTORNEY DOCKET TE03001

24. An airship comprising;
  - a frame; and
  - 5 first and second hulls pivotally coupled to said frame.
25. The airship of claim 24, further comprising a gondola vertically extendable and retractable relative to said frame.
- 10 26. The airship of claim 24, further comprising directionally controllable thrusters connected to said frame.

UTILITY PATENT APPLICATION  
ATTORNEY DOCKET TE03001

27. A method of landing an airship on water, wherein the airship has a frame in which a retractable and extendable gondola is disposed, first and second hulls pivotally connected to said frame, and directionally controllable thrusters connected to said frame, the method comprising the steps of:
  - 5 pivoting said first and second hulls relative to said frame to place a buoyant volume of said first and second hulls below said frame; and
  - 10 controlling said thrusters to lower the airship into the water.
28. The method of claim 27, wherein said gondola is extended, the method further comprising the step of retracting the gondola.
- 15 29. A method of refueling an airship comprising the step of:
  - acquiring hydrogen; and
  - apportioning the hydrogen for fuel and lifting gas
- 20 30. The method of claim 29, wherein the step of acquiring hydrogen comprises the step of electrolyzing water onboard the airship.